

**LISTING OF THE CLAIMS**  
**(including amendments, if any)**

Claim 1 (**currently amended**): A method for use in analyzing associations in the sequence of transactions, the method comprising:

loading data from the transactions into a database system, where the data includes an entry

for each transaction and the transactions are grouped into sessions, **by:**

**parsing the transaction data into fields in a base table in the database system;**

**identifying one of the fields as a session identifier field where a session identifier**

**for each transaction is stored;**

**identifying one of the fields as an item identifier field where an item identifier for**

**each transaction is stored;**

ordering the transactions in sequence within each session **by:**

**concatenating a sequence number to the item identifier for each transaction to**

**create a concatenated sequence number;** and

performing an analysis of the sessions of transactions to find associations in the sequence of

the transactions in the sessions **by:**

**building one or more support tables for one or more item identifiers with the**

**concatenated sequence number; and**

**calculating support, confidence and lift by joining the support tables.**

Claim 2 (**currently amended**): The method of claim 1 wherein the data for each transaction includes a time stamp related to a time that the transaction occurred and wherein ordering the transactions comprises:

**numbering the transactions** **creating the sequence number for each transaction** based on

the time stamps included in the data for the transactions.

Claim 3 (**currently amended**): The method of claim 2 wherein **creating the sequence number for each transaction** ~~numbering the transactions~~ comprises:

numbering the transactions in sequence from the transaction having the earliest time stamp to the transaction having the latest time stamp.

Claims 4-5 (**cancelled**)

Claim 6 (original): The method of claim 1 wherein performing the analysis comprises performing an affinity analysis.

Claim 7 (**cancelled**)

Claim 8 (previously presented): The method of claim ~~[[7]]~~ **1** wherein building the one or more support tables comprises

counting the transactions containing various combinations of item identifiers with concatenated sequence number and dividing the count by a total number of sessions to obtain a support for each of the combinations.

Claim 9 (previously presented): The method of claim ~~[[7]]~~ 1 wherein building the one or more support tables comprises

for each item identifier with concatenated sequence number, counting the transactions containing the same item identifier with concatenated sequence number and computing the support by dividing the count by a total number of sessions and storing the item identifier with concatenated sequence number and the support in a first support table.

Claim 10 (previously presented): The method of claim 9 wherein building the one or more support tables further comprises

building a second base table by selecting transactions from the first base table that include an item identifier corresponding to an item identifier and concatenated sequence number having a support more than a predetermined value.

Claim 11 (previously presented): The method of claim 10 wherein building the one or more support tables further comprises

counting the transactions in the second base table containing various combinations of item identifiers with concatenated sequence number and dividing the count by a total number of sessions in the second base table to obtain a support for each of the combinations.

Claim 12 (previously presented): The method of claim 10 wherein building the one or more support tables further comprises

counting the transactions in the second base table containing combinations of two specified item identifiers with concatenated sequence number and dividing the count by a total number of transactions in the second base table to obtain a support for each of the combinations; and

storing the item identifiers and computed support in a two item support table.

Claim 13 (previously presented): The method of claim 10 wherein building the one or more support tables further comprises

counting the transactions in the second base table containing combinations of N specified item identifiers with concatenated sequence number and dividing the count by a total number of transactions in the second base table to obtain a support for each of the combinations; and

storing the item identifiers and computed support in an N item support table.

Claims 14-19 (**cancelled**)

Claim 20 (**currently amended**): A computer program, stored on a tangible storage medium, for use in analyzing associations in the sequence of electronically stored transactions, the program comprising executable instructions that cause a computer to:

load data from the transactions into a database system, where the data includes an entry for each transaction and the transactions are grouped into sessions, **by:**

**parsing the transaction data into fields in a base table in the database system;**

**identifying one of the fields as a session identifier field where a session identifier for each transaction is stored;**

**identifying one of the fields as an item identifier field where an item identifier for each transaction is stored;**

order the transactions in sequence within each session **by:**

**concatenating a sequence number to the item identifier for each transaction;**

and

perform an analysis of the sessions of transactions to find associations in the sequence of the transactions in the sessions **by:**

**building one or more support tables for one or more item identifiers with concatenated sequence number; and**

**calculating support, confidence and lift by joining the support tables.**

Claim 21 (cancelled)

Claim 22-23 (cancelled)

Claim 24 (previously presented): A database system for use in analyzing associations in the order of transactions, the database system comprising

- a massively parallel processing system comprising
  - one or more nodes;
  - a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs;
  - a plurality of virtual processes each of the one or more CPUs providing access to one or more virtual processes;
  - each virtual process configured to manage data stored in one of a plurality of data-storage facilities;
- a parsing engine configured to parse transaction data and store the parsed transaction data in a table that is distributed across two or more data-storage facilities, where the data includes an entry for each transaction and the transactions are grouped into sessions, **by parsing the transaction data into fields in a base table in the database system; identifying one of the fields as a session identifier field where a session identifier for each transaction is stored; identifying one of the fields as an item identifier field where an item identifier for each transaction is stored;**
- a database-management component configured to operate on the table to order the transactions in sequence within each session **by concatenating a sequence number to the item identifier for each transaction;** and
- perform an analysis of the sessions of transactions to find associations in the sequence of the transactions in the sessions **by:**

**building one or more support tables for one or more item identifiers with  
concatenated sequence number; and  
calculating support, confidence and lift by joining the support tables.**

Claim 25 (cancelled)

Claim 26-27 (cancelled)